

# case study

Project ..... **Forest Bioproducts Research Institute, University of Maine**  
 Location.... **Orono, Maine**  
 Product..... **Ultima® with AirGuard™ Coating**

## the challenge:

The new Forest Bioproducts Research Institute (FBRI) houses the offices for a program that develops innovative and commercially viable technologies from forest waste. As with all its new facilities, the quality of the indoor environment of the new building was important to the University.

## the solution:

To help ensure the indoor air quality of the facility, the University partnered with Armstrong and installed Ultima with AirGuard Coating. It is the first coating for ceiling panels to actively remove formaldehyde and other aldehydes from the air.

Ultima with AirGuard Coating was installed throughout the building except the reception area and hallway. The new panels covered approximately 60% of the total ceiling area. The building is serviced by its own HVAC system with ducted return air.

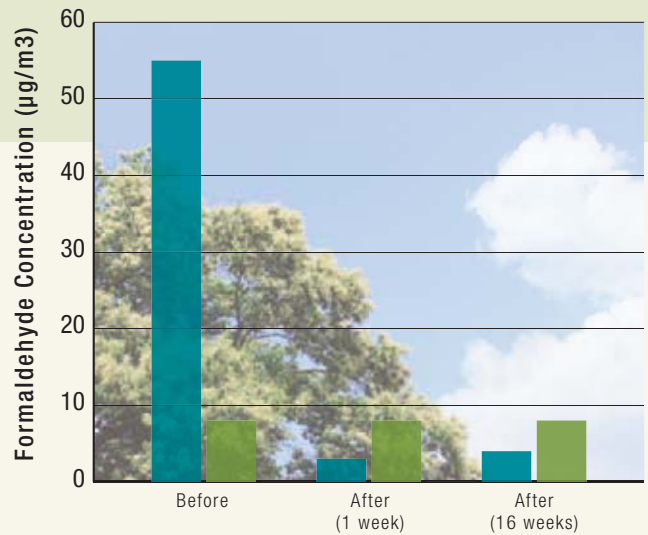
To test the effectiveness of the AirGuard Coating, formaldehyde concentrations in the indoor air were measured prior to installation of the ceiling tiles. The interior was finished except for furnishings, and the HVAC turned off. The average formaldehyde concentration was found to be 55 micrograms per cubic meter.

Formaldehyde levels were then measured after the ceiling tiles were installed and HVAC turned on. Results showed an immediate reduction in formaldehyde, due to both the addition of the fresh air and the AirGuard Coating.

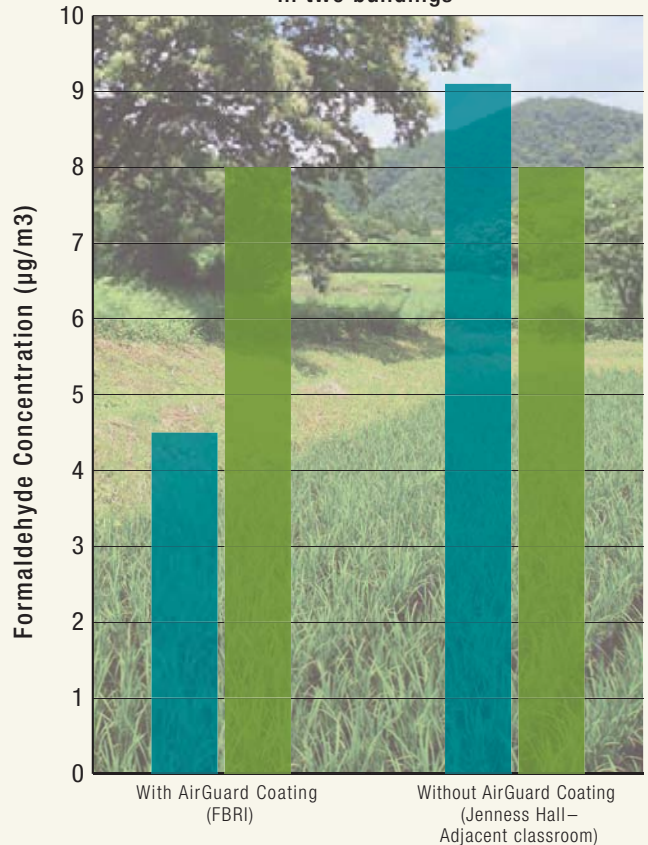
Measurements were taken again after one week and also at 16 weeks after the installation of Ultima with AirGuard Coating ceiling tiles and was found to be four and five micrograms per cubic meter respectively, both of which were lower than that of the outside air. This data showed that the subsequent removal of formaldehyde was now due primarily to the AirGuard Coating.

Formaldehyde levels were also measured in a classroom with conventional ceiling tiles in a building adjacent to the Research Institute. Results showed that the indoor formaldehyde level in the FBRI building was almost 50% lower than that in the adjacent building without the AirGuard Coating.

Comparison of Formaldehyde Concentration in Air



Comparison of Formaldehyde Concentration in two buildings



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